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WYMONDHAM URBAN DISTRICT

ANNUAL REPORT

for the year

1966

of the

MEDICAL OFFICER OF HEALTH

together with the

ANNUAL REPORT

of the

PUBLIC HEALTH INSPECTOR

D.F.Hadman, M.B.,B.S.,D.P.H.
Local Health Office,
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WYMONDHAM.

WYMONDHAM URBAN DISTRICT COUNCIL

T. J. TURNER
CLERK

TELEPHONE 3301/2

COUNCIL OFFICES,
WYMONDHAM,
NORFOLK

ACK'D

10th November, 1967.

Sir,

Annual Report of Medical Officer of Health and Public Health Inspector

Herewith I beg to submit 5 copies of this report for the year ended 31st December 1966.

I am, Sir,
Your obedient Servant,

Clerk.

The Secretary,
Ministry of Health,
Alexander Fleming House,
Elephant & Castle,
London, S.E.1.

WYMONDHAM URBAN DISTRICT COUNCIL

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1966

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present my Report on the state of the public health in this District for the year ended 31st December 1966.

INTRODUCTION

The extent to which climatic factors have an effect on the public health of a locality is undefined. Certainly those suffering from various rheumatic and respiratory disorders are commonly of the opinion that their health is closely related to the weather. In the wider view it may even be held that the psychological effect of, say, a fine summer may be of importance in the prevention and treatment of the stress illnesses which are increasingly common in the modern world. Be this as it may it is felt that an annual report on the state of the public health should contain a short record of the year's weather. Of 1966 this must be generally gloomy. Total rainfall was little over average but this was not the impression left by continuing damp and cloudy overcast. Total sunshine was, in fact, some 250 hours less than average. The second half of winter was not unduly severe although January was cold and there was some heavy snow. An unusually cold spell in mid April gave way to a good May in which sunshine and temperature were up to average. June, July and August were dull and wet but late holidaymakers enjoyed a dry and warm September. In October the gloom returned and cloud and light rain characterised the remainder of the year.

The writing of the annual report necessarily enforces a pause for reflection on past progress - or lack of it - and must also encourage a forward look into the future. This is of special interest at the present time because public health practice is in a period either of run-down or of change and it is not yet clear which will be the case. The point has been made in previous reports (but it is of such fundamental importance that it must continue to be made until the new course has been set) that the old public health concept of safeguarding the people from a hostile environment is now largely outdated. The people's health is already less threatened by the environment than by the unwisdom of the modern way of life and in each successive year the changing emphasis becomes more apparent. If it is considered that the public health service has mandate only to influence the environment and not to influence the people then, indeed, its work is on the decline but if the broader view is taken then the problems awaiting solution are at least as great as any faced in the whole history of public health work in this country. Probably the greatest of the problems is that of coronary artery disease and the 1965 figure of 113,000 deaths in England and Wales from this cause was the highest ever. The number for 1966 is not yet available but there is no reason to suppose that it will indicate that the message of healthy living is beginning to be heard. The 'happy savage' does not suffer from coronary disease but it would be unrealistic to expect western society to live his life in order to avoid this modern scourge. Perhaps it will be held that the disease is part of the price of civilization and that it must be accepted with resignation, at least until someone in a laboratory makes a discovery, but it is to be hoped that the public will before then come to accept the idea of modifying its mode of life in the interests of good health. This seems a pipe dream but there is hope in the case with which the 'ex coronary' patient so often succeeds in reducing weight, in giving up smoking, in making time for suitable exercise and, above all, in learning to relax. Unfortunately this transformation in attitude requires an initial heart attack (because it is human to think that such things always happen to other people) and about a quarter of those attacked are given no opportunity of reform. Recent thought has been given to identifying healthy individuals who are in special danger of coronary artery disease by clinical and biochemical means. If such persons were induced to modify their way of life to no greater extent than to reduce weight and give up smoking, it is probable that a considerable reduction in the disease would result, particularly among the middle aged where its social effects are most profound. Perhaps progress will be made in this limited field of persuading people at special risk but whether limited or directed at the whole population, any such effort is health education and this, despite its unfortunate public image and its school-roomish title, is therefore the key (and perhaps the only key) to continuing improvement in the nation's health. Health education effort at the local level rarely produces immediate and visible results and therefore seems unrewarding but such effort may nevertheless prove vital to success in the long term because campaigns mounted at a more remote level and using all the powerful and expensive propaganda weapons of the mass media have been shown to have only a temporary effect. Perhaps the only effective arrangement will turn out to be 'grass root' activity by the public health authorities acting in co-ordination through and with the support of the County. Thus ideas would interchange, problems would be resolved, enthusiasm would be stimulated and, where necessary, funds would be available for projects beyond the financial scope of the district.

The question perhaps most frequently put to the writer is whether the constantly increasing use of pesticides is a hazard to health? Since the matter is therefore much in the public mind it may be well to say something about it in this report. The first of the modern pesticides, D.D.T., has been in use for about 20 years and for most of the time exposure to this and subsequent pesticides has been inevitable. They are present in minute quantity in public water supplies and even in rain and air; and they are present in food in varying quantities. It happens that certain of these substances are absorbed by the body and stored in fat so that it is possible to measure human exposure by measuring the quantity in body fat. This has been done regularly for a number of years and the present position in this country is that, firstly, there has been little increase in exposure in the last five years and, secondly, that similar investigations in certain other countries have indicated a much higher level of exposure. Present evidence - which is based on an experience of twenty years - suggests that the use of pesticides need cause no anxiety about human health but obviously this is an area in which complacency would be most ill advised and the matter is kept under constant review.

From the earliest days of interest in public health and up to the establishment of food rationing in the last war, the term 'malnutrition' implied a shortage of essential nutrients in the diet and was associated with an underweight infant or child. Such malnutrition has only occurred in sporadic cases in the last quarter of a century but the associated folk-lore has persisted and the fat baby is still able to win baby contests and the overweight of the school child is regarded with parental approbation whilst the lean and wiry child is presented to school medical officers by anxious parents as being obviously deficient in some respect. In fact malnutrition (in this country) should now be regarded as synonymous with over nutrition and since weight control is now recognised as closely related to healthy living in adult life, the importance of avoiding bad dietary habits in childhood is obvious. The sweet eating habit, so dear to English children and to many of their parents, is unfortunate. Whatever the infinite variety in which the sugar is presented, it remains unchanged in its power to wreck teeth and to cause the laying down of fat without conferring any nutritional benefit. Whether the indictment against sugar is now complete is very doubtful and medical thought is already grouping a variety of illnesses, including coronary thrombosis and diabetes, as the saccharine diseases which have in common that they are possibly related to the over consumption of sugar. Whatever may come of this in the light of further research there is already ample reason for trying to bring up children on rather less carbohydrate and a great deal less refined sugar.

STAFF

Dr. D.F. Hadman served as your Medical Officer of Health throughout the year. As from 1st October he was appointed M.O.H. to Forehoe and Henstead Rural District Council and since this was made possible by a re-arrangement of County Council duties the new appointment had no effect on the time devoted to the affairs of your district.

Mr. R. F. Hudson, Senior Public Health Inspector and Surveyor and Mr. D. C.Thompson, Public Health Inspector, served throughout the year. Because of the very great increase in building control work it became clear that the appointment of a building inspector was vital if the Public Health Department was to discharge all its duties with maximum efficiency. Accordingly a part time officer was appointed in July.

There is a nationwide scarcity of public health inspectors and it was unfortunate that proposals to start a local training course at Norwich City College proved unsuccessful for want of support. It is hoped that any future initiative will fare better.

VITAL STATISTICS

(a) General

The following data, with the exception of the last paragraph on road accidents, is supplied by the Registrar-General. By 'correcting' the birth and death rates to allow for the age structure of Wymondham compared with the rest of the country, the district rates can be compared with the national experience. It must be kept in mind, however, that information based on small numbers is of limited significance.

(b) Population

The mid-year population of Wymondham in 1966 was estimated at 6,300, this being based on the 1961 Census figure as modified by births and deaths and by the estimate of movement into and out of the District made annually by your officers to the Registrar-General. In 1966 there was a natural increase of 35 and a migratory increase of 115 in the population.

(c) Births

One hundred and five births (57 boys and 48 girls) were registered in 1966, of which 8 were illegitimate. The crude birth rate was therefore 16.7 live births per thousand population and the corrected rate was 17.4 per thousand. This compares with the 1965 corrected rate of 15.1 and a 1966 England and Wales rate of 17.7 per thousand population.

Ten premature babies were born and all but one survived.

(d) Stillbirths

Three were notified giving a stillbirth rate of 27.8 still births per 1,000 total births and this compares with the England and Wales figure for the year of 15.4. All three births occurred in hospital and one was due to congenital abnormality whilst two followed obstetric complications.

(e) Infant Mortality

Three children died in infancy during 1966. Two survived only a few hours after birth and succumbed to congenital malformation and prematurity respectively. The third case was of a four month infant who suffered an overwhelming respiratory infection and died before medical aid could be summoned. The infant mortality rate was therefore 28.6 infant deaths per 1,000 live births and the national rate, the lowest ever recorded, was 18.9.

(f) Deaths

Deaths totalled 70 of which 41 were male and 29 female. The crude death rate was therefore 11.1 deaths per 1,000 population and the corrected rate 10.3. This may be compared with an England and Wales rate of 11.7 deaths per 1,000 population.

Table 10 shows that 33 of the deaths occurred at the age of 75 years or more, a proportion of 47% which is rather less satisfactory than in the previous year, and the average age at death was 71 years. Attention has been drawn in previous reports to the life wastage suffered by those dying in the age group 45 to 65 years and it has been suggested that many of these deaths should be regarded as preventable and particularly those due to the following principal causes.-

	1966	1965	1964	1963
Cancer	3	2	8	8
Coronary disease	2	2	4	2
Accidents	1	1	-	1
Bronchitis	-	-	1	-
	6	5	13	11

No conclusion can be drawn from these small numbers but the record of the past two years is encouraging.

(g) Road Injuries Data

The following details of road accidents are again made available by the Chief Constable. (The corresponding figures for 1965 are in brackets).

	Killed	Seriously Injured	Slightly Injured
Drivers	- (-)	11 (3)	14 (18)
Passengers	- (1)	10 (14)	18 (17)
Pedestrians	- (-)	4 (2)	8 (5)
Motor Cyclists	1 (-)	1 (6)	11 (7)
Pillion passengers	- (-)	1 (1)	2 (2)
Pedal cyclists	- (-)	2 (3)	8 (2)
	1 (1)	29 (34)	61 (51)

COMMUNICABLE DISEASES

Infectious disease did not present an important problem in 1966 since although the unusually large total of 306 such cases were notified, 237 of them were of MEASLES. This disease was prevalent in the final quarter of the year and it can be anticipated that no similar outbreak will be experienced until the customary interval of two years had elapsed. This biennial pattern had not been evident in the last few years during which measles outbreaks have been relatively frequent but of limited extent. Vaccination against measles was practised only on a very small scale.

Fifteen cases of SCARLET FEVER were notified and the customary practice was continued of examining family contacts of school age and excluding those harbouring the germ. These measures are taken because, although scarlet fever normally runs a very mild course, it is occasionally complicated by heart or kidney involvement.

In a farming area the zoonoses or diseases of animals transmissible to man are of special interest. BRUCELLOSIS which presents as contagious abortion in cattle was the subject of much discussion during the year and a point has now been reached at which virtually all interested parties recognize the great waste, in terms of farming economy, which the infection causes and are agreed that eradication is overdue. A pilot eradication scheme was being mounted at the close of the year and will start on a voluntary basis. This is a welcome step but even if a total eradication scheme was already launched it would not merit special plaudit since several of the major countries of Europe have already succeeded in eliminating brucellosis. In fact no milk samples from Wymondham herds were found to be infected in 1966.

TUBERCULOSIS was not notified in 1966. It will be known that an anti-tuberculous vaccine, B.C.G., is offered to all school children at 13 years who have not already gained a degree of natural immunity by exposure to the disease. A preliminary skin test is used to identify this group and the proportion of children with a positive skin test is therefore some index of the extent of the disease in the area. The results of this test at the two Wymondham secondary schools were that nine of 159 children were positive, a percentage of less than six, whilst the percentage of positive reactors in Norfolk generally was of the order of 15%. This result strongly suggests that there are few unknown cases of infectious tuberculosis in the District.

No case of ANTHRAX, another important zoonosis, was reported in animals during the year but there were two instances of SALMONELLA infection in calves. Salmonella germs, of which there are very many different types, are the most common cause of food poisoning in man. They are primarily a germ parasite of animals, especially calves, and if the animal reservoir did not exist then human infection would cease. In fact the effective animal reservoir has probably increased in recent years and the responsibility may lie in new methods of animal commerce. Calves are supplied by dealers to all parts of the country and an infected calf herd may therefore disseminate the infection widely. Contamination of transport vehicles by scouring animals may then, in the absence of an adequate vehicle cleansing system, lead to further spread to other herds. A particular problem arises from the practice of consigning calves not direct to a specific buyer but to the market place where the animals may infect or be infected. If the price is right the calves are sold but if not they are moved on to other markets. Each time the infected animal has opportunity of transmitting its infection and the healthy calf, susceptible by stress and exposed to salmonellosis, may acquire the infection.

HEAD INFESTATION occurred more than once in 1966 and furnished further evidence that standards of personal hygiene, which have been assumed to have risen steadily with the increasing standard of education, may, for the time being, have slipped a little. A proportion of young people pass through a phase in which scruffiness is the correct thing and this facet of the modern human behaviour pattern is having a recognizable, though not very important, effect on the public health.

SMALLPOX was epidemic elsewhere in the country in the form of the unusual variola minor. It is of local interest that the first recognized outbreak of this disease in England occurred in the Waveney Valley in 1919. On this recent occasion Norfolk remained uninvolved although one case of atypical chicken pox caused some concern in Area 5. Vaccination against smallpox reached figure of 66% of Wymondham infants which is still not satisfactory but an improvement on the low figures of the previous three years. The vaccination of children after the first birthday instead of in infancy was not popular when the change was made some four years go and was no doubt the reason for a falling acceptance rate. It seems that the trend has now been halted and reversed.

ENVIRONMENTAL HYGIENE

The following paragraphs do not provide a full account of this broad subject but full details may be found in the attached reports of the Senior Public Health Inspector.

(a) Housing

Private enterprise built the record number of 124 dwellings in 1966 and commenced a further 165. Council completed two houses and had 22 under construction at the end of the year.

A 10% sample Census was conducted during the year and the following results indicate the progress that has been made in the five years since the last full census in improving housing standards in the District.

	Percentage of Houses WITHOUT			Percentage of Houses WITH
	Hot Tap	Fixed Bath	Waterborne Sanitation	All Three Amenities
Wymondham U.D. 1961	45.1	40.7	17.2	51.8
Wymondham U.D. 1966	24.8	27.6	Insufficient Data	64.3
All Norfolk Urban Districts and Municipal Boroughs 1966	18.5	16.1	2.1	72.7

The task of modernising the 239 pre-war council houses continued and a further 33 were completed during the year. It is most desirable that Council should take all possible steps to deal with the remaining 109 dwellings as a matter of high priority.

(b) Sewage Disposal

Further difficulties were encountered at the sewage treatment plant. At the beginning of the year a considerable sum of money had been spent on modification to the filtration beds and it was hoped that an effluent would be produced satisfactory to the River Authority. However, notwithstanding an improvement in the quality of the effluent, the Authority's searching standards were not reached and it was agreed towards the end of 1966 that a system of re-circulation should be installed.

(c) Water Supply

The headworks at Wicklewood continued to produce a water of good quality and, in the summer, of remarkable quantity, when daily output reached a maximum of over 700,000 gallons. The demand for domestic water is constantly increasing as more and more people attain a sophisticated standard of living. This, of course, is excellent, but since the amount of available water is limited, it may be sensible to look for alternatives to using potable meticulously purified water for irrigation or for the flushing of water closets. Wherever possible the local conservation of water is to be encouraged.

In January the County Council decided not to support fluoridation of water supplies and since only the local health authority has power to meet the cost of the measure your Council had no course but to accept the decision. Later in the year a number of authorities decided for fluoridation and it is possible that Norfolk will have second and more mature thoughts before long. Meantime unnecessary dental decay continues in our children.

(d) Public Health Nuisances

It may be of interest to report that during the year the Ministry of Housing and Local Government gave its opinion on two aspects of the impingement of housing development on animal husbandry and of subsequent complaint of farmyard nuisance. Firstly, the Ministry considered that there was a case for withholding planning permission to housing development in situations where neighbouring agricultural activity would constitute a nuisance to the new residents. Secondly, it was considered whether, in the event that housing had developed in proximity to a farm, any consequent or serious nuisance should be treated as a statutory nuisance and abatement action taken. The Ministry considered that normal action should be taken and it appeared that the fact that the farmer was there first did not provide him with any privilege.

The wet year was favourable to rat increase and they presented a serious nuisance. It would be helpful if the public accepted greater responsibility for rat destruction but one of the principal difficulties is the frustration of the individual who clears his own rats only to be re-infested from neighbouring property. A local authority should do all it can to encourage individual effort and it may be that statutory action should be taken a little more often than is usually the case. Warfarin remains the rodenticide of choice and is efficient when properly used. Reports were published during the year of Warfarin resistant rats on the Welsh border and the failure of faulty baiting technique has since been blamed on 'resistance' wherever it has occurred. In fact no Warfarin resistant rat has been found in East Anglia.

COUNTY COUNCIL SERVICES

A brief account of the welfare services provided under the National Health Service and National Assistance Acts was included in the Report for 1965 and the various official and voluntary agencies continued this excellent work in 1966.

The Home Help Service continued to expand and this undoubtedly enables many elderly people to continue in their own home rather than go into county accommodation when they begin to have difficulty in looking after themselves. It is to be noted, of course, that your Council has played a full part in this endeavour by its provision of grouped home accommodation for the elderly. A Meals-on-Wheels service started in June and soon played an important part in caring for the welfare of the elderly whilst the Old People's Club did valuable work in countering the common loneliness of age.

The local committee of the Norfolk Association for the Care of the Physically Handicapped continued its work, as did the agencies responsible for the welfare of the mentally ill and the mentally handicapped. The social centre for subnormal adolescents and adults at Spooner Row filled a vital need in helping these people to feel wanted and part of the community. The public attitude to mental disorder has changed greatly in recent years but there is still much room for more humanity and the social centres do make for a better understanding.

The problem of hypothermia in the elderly remained in mind and with the onset of the colder weather a leaflet was sent out to home helps and others which explained the danger, how it is prevented, recognized and treated. At the same time low reading clinical thermometers were made available to nurses so that suspected low body temperatures could be confirmed and minimum reading thermometers were also made available so that lowest bedroom temperatures could be recorded. Since the winter proved mild there was fortunately little evidence of hypothermia but the arrangements will prove their value in due course.

CONCLUSION

I am again grateful to the Chairman of Council and the Chairman and Members of the Public Health Committee for their encouragement and support throughout the year. I would like also to acknowledge the ready co-operation of my colleagues at Wymondham and at the Norwich office.

I have the honour to be

Your obedient servant

D. F. Hadman

Local Health Office,
Aspland Road,
NORWICH, NOR 19S.

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WYMONDHAM URBAN DISTRICT - 1966

Table 1. GENERAL STATISTICS

Area (in acres)	10,950
Estimated Resident Population	6,300
Rateable Value	£ 196,793
Sum Produced by a Penny Rate	£ 828

Table 2. LIVE BIRTHS

	Males	Females	Total
Legitimate	53	44	97
Illegitimate	4	4	8
Totals	57	48	105

Live Birth Rate per 1,000 of Estimated Resident Population = 16.7

Table 3. STILL BIRTHS

	Males	Females	Total
Legitimate	1	1	2
Illegitimate	1	-	1
Totals	2	1	3

Still Birth Rate per 1,000 Total Births = 27.8

Table 4. TOTAL BIRTHS

	Males	Females	Total
Live	57	48	105
Still	2	1	3
Totals	59	49	108

Table 5. INFANT DEATHS

(a) Infant Mortality (Deaths of Infants under 1 year)

	Males	Females	Total
Legitimate	2	1	3
Illegitimate	-	-	-
Totals	2	1	3

Infant Mortality Rates:
Total = 28.6 (per 1,000 live births)
Legitimate = 34.5 (per 1,000 legitimate births)
Illegitimate = 0.0 (per 1,000 illegitimate births)

(b) Neo-Natal Mortality (Deaths of Infants during first four weeks)

	Males	Females	Total
Legitimate	1	1	2
Illegitimate	-	-	-

Neo-Natal Mortality Rate (per 1,000 live births) = 19.0

(c) Early Neo-Natal Mortality (Deaths of Infants under 1 week)

	Males	Females	Total
Legitimate	1	1	2
Illegitimate	-	-	-

Early Neo-Natal Mortality Rate (per 1,000 live births) = 19.0

(d) Perinatal Mortality (Still births and deaths under 1 week)

	Males	Females	Total
Legitimate	3	2	5
Illegitimate	1	-	1

Perinatal Mortality Rate (per 1,000 total births) = 55.6

Table 6. ILLEGITIMATE BIRTHS

Males - 4 Females - 4 Total - 8 = 7½% of Total Live Births.

Table 7. MATERNAL DEATHS (including abortion) = NIL

Maternal Mortality Rate (per 1,000 total births) = 0.0.

Table 8. DEATHS (All ages)

Males	Females	Total
41	29	70

Crude Death Rate (per 1,000 of Estimated Resident Population) = 11.1

Table 9. CAUSES OF DEATH OF INFANTS UNDER ONE YEAR

Cause	Males	Females	Total
Prematurity	1	-	1
Pneumonia	1	-	1
Congenital heart lesion	-	1	1

Table 10. NOTIFICATIONS OF DEATHS RECEIVED DURING THE YEAR (ACCORDING TO AGE GROUPS)

	Males	Females	Total
Under 4 weeks	1	1	2
4 weeks and under 1 year	1	-	1
1 " " 5	-	-	-
5 " " 15	-	-	-
15 " " 25	-	-	-
25 " " 35	-	-	-
35 " " 45	1	-	1
45 " " 55	-	1	1
55 " " 65	5	4	9
65 " " 75	12	11	23
75 and over	21	12	33
Totals	41	29	70

Table 11. CAUSE OF TOTAL DEATHS (Registrar-General)

Cause	Males	Females	Total
9. Other infective and parasitic diseases.	1	-	1
11. Malignant neoplasm, lung, bronchus.	1	-	1
14. Other malignant and lymphatic neoplasms.	1	8	9
16. Diabetes.	-	1	1
17. Vascular lesions of nervous system.	4	1	5
18. Coronary disease, Angina.	10	6	16
19. Hypertension with heart disease.	1	-	1
20. Other heart diseases.	4	4	8
21. Other circulatory diseases.	2	1	3
23. Pneumonia.	4	4	8
24. Bronchitis.	3	-	3
28. Nephritis and nephrosis.	1	-	1
32. Other defined and ill-defined diseases.	6	4	10
33. Motor vehicle accidents.	2	-	2
34. All other accidents.	1	-	1
Totals	41	29	70

Table 12. SUMMARY OF BIRTH AND DEATH RATES

	1960	1961	1962	1963	1964	1965	1966
Live Births (per 1,000 pop)							
Wymondham U.D.	(85) 14.5	(91) 15.4	(70) 11.8	(92) 15.5	(99) 16.4	(89) 14.5	(105) 16.7
Area 5.	14.1	14.2	13.9	15.2	14.9	14.4	15.0
England & Wales (provisional)	17.1	17.4	18.0	18.2	18.4	18.1	17.7
Still Births (per 1,000 total births)							
Wymondham U.D.	(2) 23.0	(nil) 0.0	(2) 27.8	(nil) 0.0	(1) 10.1	(1) 11.1	(3) 27.8
Area 5.	20.7	8.9	21.4	29.1	6.7	13.5	17.5
England & Wales (provisional)	19.7	18.7	18.1	17.3	16.3	15.7	15.4
Crude Deaths (per 1,000 pop)							
Wymondham U.D.	(67) 11.4	(54) 9.2	(73) 12.3	(78) 13.2	(91) 15.1	(80) 13.0	(70) 11.1
Area 5.	11.8	12.4	12.1	12.2	12.9	13.3	11.9
England & Wales (provisional)	11.5	12.0	11.9	12.2	11.3	11.5	11.7
Infant Mortality (per 1,000live births)							
Wymondham U.D.	(nil) 0.0	(nil) 0.0	(nil) 0.0	(3) 32.6	(3) 30.3	(2) 22.5	(3) 28.6
Area 5.	14.1	9.0	14.5	11.6	20.5	6.8	14.6
England & Wales (provisional)	21.7	21.4	21.4	20.9	20.0	19.0	18.9

NOTE: 1. Figures in brackets are the actual numbers for Wymondham U.D.

2. Area 5 comprises Depwade and Loddon R.Ds. and Diss and Wymondham U.Ds. Also Forehoe and Henstead R.D. from 1st October 1966 but statistics for this district have not been included in this report.

Table 13. DEATHS DUE TO CANCER - Wymondham U.D.

	1960	1961	1962	1963	1964	1965	1966
Number of deaths.	7	10	15	13	13	14	10
Percentage of total deaths.	10.4	18.5	20.5	16.5	14.3	17.5	14.3

Table 14. CANCER DEATHS DURING LAST FIVE YEARS - Wymondham U.D.

Year	Male			Female		
	Total Deaths	Total Cancer Deaths	Cancer of Lung	Total Deaths	Total Cancer Deaths	Cancer of Lung
1966	41	2	1	29	8	-
1965	49	9	2	31	5	-
1964	46	9	3	45	4	-
1963	45	9	5	33	4	-
1962	37	11	2	36	3	-
Totals	218	40	13	174	24	-

Table 15. NOTIFICATION OF INFECTIOUS DISEASES (EXCLUDING TUBERCULOSIS) According to Age Groups - Wymondham U.D.

	Under 1	1-4 yrs.	5-14 yrs.	15-24 yrs.	Over 25	Total
Scarlet Fever	-	1	14	-	-	15
Measles	10	106	167	3	1	287
Dysentery	-	-	1	-	-	1
Infective Jaundice	-	-	-	2	1	3
Totals	10	107	182	5	2	306

Table 16. INCIDENCE OF INFECTIOUS DISEASES (EXCLUDING TUBERCULOSIS) DURING LAST FIVE YEARS - Wymondham U.D.

	1962	1963	1964	1965	1966
Scarlet Fever	6	9	-	-	15
Measles	1	105	37	40	287
Whooping Cough	3	2	-	1	-
Pneumonia	-	-	1	1	-
Erysipelas	-	1	-	-	-
Dysentery (Sonne)	-	-	-	-	1
Food Poisoning	-	-	-	-	-
Puerperal Pyrexia	-	1	-	-	-
Poliomyelitis (Paralytic)	-	-	-	-	-
Infective Jaundice	1	1	-	-	3
Encephalitis (post inf.)	-	1	-	-	-
Meningococcal infection	-	-	-	1	-
Totals	11	120	38	43	306

Table 17. DETAILS OF NEW CASES OF TUBERCULOSIS FOR LAST FIVE YEARS Wymondham U.D.

		1962	1963	1964	1965	1966
Pulmonary						
	Male	2	1	-	-	-
	Female	-	-	-	1	-
Non-Pulmonary						
	Male	-	-	-	-	-
	Female	-	1	-	-	-
Wymondham U.D.	Total	2	2	-	1	-
Area 5	Total	8	7	7	8	10

Table 18. VACCINATION AGAINST SMALLPOX

Vaccination of children (under five years of age) during the last five years resident in the District and Area 5, are shown in the following table.

	Wymondham U.D.					Area 5				
	1962	1963	1964	1965	1966	1962	1963	1964	1965	1966
Number of live births registered.	70	92	99	89	105	550	601	592	584	617
Number of vaccinations recorded (0-4 years).	66	16	32	59	72	420	222	276	326	417
Percentage vaccinated.	94	17	32	66	69	76	37	46	56	67

Table 19. VACCINATION AGAINST POLIOMYELITIS

The following is the number of primary immunisations and boosters given in Area 5 since the scheme commenced. Table A shows the numbers immunised with the Salk vaccine (by injection) and Table B those given the Sabin vaccine (oral) which became generally available in mid-1962.

(A) SALK

Year	Primary			Booster (3rd)			Booster (4th)
	Age 0-4	Age 5-14	Age 15+	Age 0-4	Age 5-14	Age 15+	Age 5-12
1966	4	-	*	10	2	2	-
1965	28	2	*	18	7	*	-
1964	24	5	1	30	5	-	5
1963	31	4	26	42	6	31	-
1962	234	37	151	294	115	914	27
1961	601	535	2068	427	228	824	3017
1960	397	227	853	660	566	1636	-
1959	593	677	2220	1377	3261	864	-
1958	1648	3159	154	32	1284	2	-
1957	197	1115	-	-	-	-	-
1956	40	121	-	-	-	-	-

(B) SABIN

Year	Primary			Booster (3rd- after 2 Salk)			Booster (4th)
	Age 0-4	Age 5-14	Age 15+	Age 0-4	Age 5-14	Age 15+	School Age
1966	612	30	*	-	-	*	417
1965	470	39	*	-	-	*	519
1964	554	129	22	5	1	-	785
1963	424	22	15	66	2	-	483
1962	197	131	1359	230	312	1077	426

* Records for persons over 15 years not available.

Table 20. DIPHTHERIA IMMUNISATION

The following is the number of primary immunisations and booster injections given during the last five years in respect of Area 5.

Year	Primary Injections			Booster Injections	
	Under 1	Total under 5	Age 5-14	Under 5	Age 5-14
1966	256	594	34	370	670
1965	165	474	74	210	899
1964	204	486	28	125	342
1963	244	547	97	94	361
1962	155	443	23	48	304

Table 21. IMMUNISATION AGAINST WHOOPING COUGH

The following is the number of whooping cough immunisations recorded in Area 5 during the last five years.

	Primary				Boosters
Year	Under 1	Age 1-4	Age 5-14	Total	Under 5
1966	256	336	5	597	368
1965	161	302	4	467	185
1964	202	276	8	486	39
1963	244	301	5	550	86
1962	149	291	12	452	45

Table 22. IMMUNISATION AGAINST TETANUS

The following is the number of tetanus immunisations recorded in Area 5 during the last five years. Immunisation against this disease was included in the County Council's scheme in September 1958.

Year	Primary				Booster		
	Age Under 1	Age 1-4	Age 5-14	Age 15+	Age 1-4	Age 5-14	Age 15+
1966	256	338	203	*	374	1058	*
1965	165	310	355	*	212	1589	*
1964	204	282	136	124	131	418	65
1963	242	306	504	219	100	284	44
1962	152	312	725	399	50	103	37

* Records for persons over 15 years not available

Table 23. B.C.G. VACCINATION AGAINST TUBERCULOSIS

This is given at the age of 13 years to all school children who do not react to the tuberculin skin test. Number of skin tests and subsequent B.C.G. vaccinations in Area 5 in the last five years is recorded.

Year	Number Skin Tested	Number Positive	Number B.C.G. Vaccinated
1966	553	67	454
1965	556	86	427
1964	474	68	332
1963	472	97	352
1962	586	146	434

PUBLIC HEALTH INSPECTOR'S ANNUAL REPORT

FOR THE YEAR 1966

To the Chairman and Members of the
Wymondham Urban District Council.

Mr. Chairman, Madam and Gentlemen,

I beg to submit my nineteenth Annual Report as Public Health Inspector for the year ended 31st December, 1966.

STAFF

Your Public Health Inspector holds in addition the appointments of Highway Surveyor, Building Surveyor, Water Engineer and Petroleum Inspector and has the services of an assistant (qualified as a Public Health Inspector) and 2 Male Clerks.

HOUSING

Slum Clearance

During the year under review 3 families, comprising 10 persons were displaced from unfit houses and rehoused by the Council.

Proceedings under the Housing Act, 1957.

Number of undertakings given by owners and accepted by the Council to carry out work to make houses fit for habitation	-
Number of Demolition Orders made	2
Number of Closing Orders made	-
Number of houses made fit	-
Number of houses demolished	-

Informal Proceedings under Housing and Public Health Acts.

Number of informal notices served	4
Number of informal notices complied with	3

The progress in dealing with sub-standard houses continues to be slow. During the year demolition orders were made in respect of two houses and three families were rehoused.

New Housing Progress.

During the year 126 dwellings were completed, 2 by the Council and 124 by private enterprise.

The position with regard to post-war housing at the 31st December, 1966 was that a grand total of 914 units of habitation had been completed and occupied, 15 temporary and 391 permanent dwellings provided by the Council and 508 by private enterprise. The dwellings built by the Council are made up as follows:-

11	4-bedroom houses
178	3-bedroom houses (including Warden's house)
30	2-bedroom flats) in Duplex houses
30	1-bedroom flats) in Duplex houses
28	2-bedroom flats
4	1-bedroom flats
59	2-bedroom bungalows
37	1-bedroom bungalows
15	2-bedroom temporary bungalows
2	2-bedroom flats over shops
12	2-bedroom houses

POST WAR ACCOMMODATION (COUNCIL).

	4-Bedroom Accommodation	3-Bedroom Accommodation	2-Bedroom Accommodation	1-Bedroom Accommodation
	11	178	146	71
Post War conversions (Fairland Flats)			2	4

For the information of the Council details of Pre-war Houses are as follows:-

4-Bedroom Accommodation Houses	4-Bedroom Accommodation Flats	3-Bedroom Accommodation	2-Bedroom Accommodation
4	2	226*	30∅

∅ Includes Council Offices Flat.
* Includes Manor House, Bridewell Street and Cemetery Lodge.
∅ Includes 12 cottages, Rattle Row - Rose Cottage, Pople Street - 3 Cottages, Skippers Row - Glendale, Back Lane - and house occupied by Mrs. Platten which had one bedroom converted into a bathroom.

New Housing Progress.

Speculative building accelerated during the year on five sites in the town. One Hundred and Twenty Four houses were completed by private enterprise; the previous highest figure was in 1965 when 75 houses were erected. At the close of the year a further 165 were under construction.

The Council completed two during the year and a further twenty two were under construction on the 31st December, 1966.

Total Housing Accommodation in the District.

At the 31st December, 1966 the total number of dwellings in the Urban area was 2411 including those occupied in connection with a business, i.e. shop, licensed premises, and hotels etc.

The total number of dwellings owned by the Council including sub-standard houses in temporary use was 674 which is equivalent to 27.95% of the total, as against 29.49% for 1965.

House Purchase & Housing Act 1959
Housing Acts 1961 & 1964
Grants for Improving and Modernising Housing Accommodation.

(a) Pre-War Council Houses.

Thirty three pre-war Council Houses were modernised during the year by installing baths, lavatory basins, internal W.C.'s, new sinks and draining boards and hot water systems and at the end of the year work was in hand on a further seven houses at Barnham Broom Road.

Schemes already completed and those in hand total 137 houses, this leaves 102 pre-war houses still to be modernised.

(b) Privately Owned Houses.

During the year 11 houses were improved and modernised under the Housing Acts; Discretionary Grant 1, Standard Grants 10.

Discretionary Grants.

Year	Number of Houses Modernised or improved	Total Amount of Grants £.	s.	d.
1952	1	290.	0.	0.
1953	2	320.	16.	11.
1954	2	269.	6.	4.
1955	9	2421.	13.	0.
1956	14	2587.	12.	4.
1957	11	3101.	0.	0.
1958	10	2778.	0.	0.
1959	10	2549.	9.	6.
1960	8	2431.	0.	0.
1961	2	278.	10.	0.
1962	4	1020.	17.	0.
1963	6	2425.	19.	7.
1964	3	1189.	1.	9.
1965	3	1054.	12.	4.
1966	1	316.	10.	0.
Total	86	£23,034.	8.	9.

Average Grant per dwelling £26, 16 10d.

Standard Grants.

Year	Number of Houses Modernised or Improved	Total Amount of Grants.		
		£.	s.	d.
1959	1	105.	0.	0.
1960	3	247.	13.	2.
1961	8	746.	9.	6.
1962	6	593.	4.	11.
1963	16	1937.	14.	4.
1964	11	1226.	17.	11.
1965	20	2747.	7.	3.
1966	10	1969.	2.	4.
Total	75	£9573.	9.	5.

Average Grant per dwelling £127. 12. 11d.

Grouped Homes for Old People.

The Grouped Homes Scheme at Standley Court continued to function smoothly and efficiently. The table gives an indication of the extent to which the services provided are made use of.

	1961	1962	1963	1964	1965	1966
Calls for assistance by alarm bells ...	21	29	34	11	17	11
Doctors called	35	47	28	15	26	18
General Assistance	185	151	214	345	446	437
General Assistance on instructions of G.P's	22	23	3	10	-	69
Chimney Fires	-	-	-	-	-	-
Use of Visitors beds (number of nights)	7	26	7	5	4	-
Deaths...	-	3	3	2	2	3

Demand for New Houses.

The register of applications for Council Houses from persons residing or working within the Urban District showed 134 live applications as at the 31st December, 1966. The details of these applications are set out below along with the figures for the previous four years

	1962	1963	1964	1965	1966
Childless families	20	20	25	29	34
Families with 1 child	33	20	20	23	31
Families with 2 or more children	21	28	33	32	25
Old People requiring bungalows	41	42	37	46	44
Total	115	110	115	130	134

Overcrowding.

	Housing Act Standard	Bedroom Standard
Cases remaining on register - 31.12.65.	1	8
Cases reported 1.1.66 - 31.12.66.	-	2
Cases abated 1.1.66 - 31.12.66.		
(a) by action of Local Authority	-	1
(b) otherwise	1	1
Total remaining at 31.12.66.	-	8

WATER

Headworks.

The statutory supply area of the Urban Council's water undertaking is the whole of the Urban District and approximately 950 acres within the Rural District of Forehoe & Henstead. In addition about 35,000,000 gallons of water is supplied in bulk annually to the latter Rural District.

The pumping station is situated at Wicklewood in the Rural District of Forehoe & Henstead. The headworks comprise five 12" boreholes approximately 300 ft. in depth. Each borehole is capable of yielding 10,000 gallons per hour. The normal average rest level is 73'7" and the pumping level (at8,000 g.p.h.) 93'6". The concrete reservoir has a capacity of 240,000 gallons, the top water level being 226ft. above ordnance datum. The water is softened, aerated and chlorinated.

Softening Plant.

The Base Exchange Softening Plant has operated satisfactorily during the year. The resin was acid washed at six monthly intervals, and the output returned to above the design figure of 115,000 gals per regeneration after each treatment.

The output of the plant has averaged the design figure during the year i.e., 115,000 gals of raw water with a hardness of 26.2° reduced to zero and giving an output of 205,000 gals of blended water with a residual hardness of 10½°. 625lbs of salt is required per regeneration.

Chlorination.

The old Gas Type Chlorinator gave trouble in the early part of the year and in July a new V-Notch Junior Solution Feed Chlorinator, type A.741B, was supplied and installed by Messrs. Wallace & Tiernan Ltd.

Extension of Mains.

New mains were laid as follows during the year:-

Barnham Broom Road	251 yds.	1¼ Miles.
Ketts Estate (2nd Stage)	475 yds.	
Golf Course Road, Morley	1075 yds.	
Norwich Construction site	360 yds.	
Browick Road	70 yds.	

Regrouping of Water Undertakings.

There is nothing to report under this heading for the twelve months under review.

Distribution System.

The total mileage of mains under the control of the Council is 27¼ miles, which includes approximately 1¼ miles of 3" mains laid during the year.

The only fracture in water mains occurred in Sawyers Lane (4" Main).

Sampling.

A total of 19 samples of water were taken from various sections of the distribution system for bacteriological examination and in each case the result was satisfactory.

In addition seven samples were taken from private wells and bores.

Details of full chemical analysis of the raw water is given on Folio 9 along with a summary of the Headworks weekly report.

SEWAGE DISPOSAL AND SEWERAGE.

Sewage Disposal Works.

Work to improve the floor drainage and ventilation of the filters was completed and the result was an improvement in B.O.D. and Suspended Solids figures. The improvement was not, however, sufficient to produce an effluent of Royal Commission standard, and at the end of the year the Council's Consulting Engineers were preparing a scheme for Recirculation.

A "Sprite" dumper was purchased during the year for removing sludge from the beds. Arrangements made with farmers for hauling the sludge direct on to land adjoining the works has helped considerably and, as far as sludge is concerned, the position is better than it has ever been. There has been no accumulation of sludge on the works requiring a second handling.

Sewerage System.

The sewerage extension to Greenland Avenue and part of Tuttles Lane was completed in the early months of the year. The work included the laying of approximately 320 yds of 6" diam. sewer with manholes and a small pumping station.

Further to my last Annual Report and my remarks on the overloaded condition of the main outfall sewer, the Council gave this matter consideration and instructed its Consulting Engineers to prepare a report. In preparing this report the Consulting Engineers were asked to consider the possibility of carrying out the work in stages.

Cesspools.

The adjoining Rural District Council empties cesspools when necessary within the Urban District. The Rural District Council charges your Council £2 per load. Where no sewer is available the Council recovers £1 per load from the person requiring this service and in other cases the full cost of £2 is recovered.

Refuse Collection and Disposal.

There is a fortnightly collection of household refuse in the rural parts of the district. This work is carried out by a Contractor.

Additional residential development, changes in retail trading (plastic containers, cardboard and paper wrappings) and methods of heating houses which make it difficult to burn refuse are all causes of the increasing bulk of household refuse. At the end of the year it had become apparent that,in order to maintain a weekly collection, a larger vehicle would have to be acquired.

1. Weekly Collection Area (Direct Labour).

Norwich Road - as far as Urban District Boundary.
Browick Road - as far as Level Crossing.
Silfield Road - as far as Coll's Farm.
London Road - including 2 cottages near Longfields House.
Cavick Road - as far as "Johnson's Farm".
To the north of the town - Tuttles Lane is roughly the limit of collection.

Number of bins emptied weekly - 2241.

2. Fortnightly Collection (Contract).

Spooner Row, Suton, Silfield, Browick and Downham.

Number of bins emptied fortnightly - 356

Pail closets within the weekly collection area are emptied by the refuse collectors; the number is now 47.

Trade refuse is collected and a charge made of 3d in the £1 of the Rateable value of the premises concerned.

Domestic and Trade Refuse is disposed of at the Council's Strayground Lane tip. Controlled tipping is carried out as and when suitable covering material is available.

FOOD & DRUGS ACT 1955.

Premises Registered under Section 16.

Manufacture of sausages etc.	7
Manufacture of Ice Cream	NIL
Sale of Ice Cream	24

Milk & Dairies General Regulations 1959.

There are 4 traders in the Urban District registered under the above Act as Milk Distributors.

Part 1V. Section 62.

There is one licensed Knackers Yard in the Urban District.

The Animal Boarding Establishment Act 1963.

The premises known as No.54 The Lizard, Wymondham are licensed as an animal Boarding Establishment.

Food Hygiene Regulations.
Inspection & Supervision of Food.

Food Premises in Urban District.

Trade.	Number of Premises.	Fitted to comply with Regulation 16.	No. to which Regulation 19 applies.	No. fitted to comply with Regulation 19.
Butchers	6	6	6	6
Grocers	22	22	20	20
Catering Establishments	6	6	6	5
Wet & Fried Fish	3	3	3	3
Greengrocers	7	7	7	7
Bakehouses	2	2	2	2
Licensed Premises	14	14	14	14

Regular visits of inspection have been made to food premises of all types during the year under review. The number of visits was 106.

One Green Grocery firm was requested to carry out work to bring its premises into conformity with the requirements of the Offices, Shops & Railway Premises Act and the Food Hygiene Regulations. This necessitated the rebuilding of part of the premises. The work was completed in the year under review.

Improvements were carried out to one Butcher's shop including new preparation room, enlargement of shop and additional washing facilities.

One trader was warned and advised to pay stricter attention to rotation of stocks following the finding on the premises of chocolate covered biscuits which had been attacked by either Biscuit or Chocolate Weevil. It was ascertained that the biscuit in question had been in stock for more than a year. The manufacturers stated that if a trader had stocks over 6 months old, they would take them back.

Food Condemned.

The only food condemned during the year was 20 No. 8 oz. packs of American Lard.

Factories.

The following table gives details of the number of factories in the district together with notices served to remedy defects found in the course of inspection of the various premises.

	Number on Register	Number of		
		Inspections	Written Notices	Occupiers prosecuted
(i) Factories in which Sections 1,2,3,4, & 6 are to be enforced by Local Authorities	-	-	-	-
(ii) Factories not included in (i) in which section 7 is enforced by the Local Authority	60	23	-	-
(iii) Other premises in which Section 7 is enforced by the Local Authority (excluding out-workers' premises)	22	83	4*	-
Total	82	106	4*	-

* Verbal instructions to builders to provide Latrine accommodation.

	Number of cases in which defects were found				Number of cases in which prosecutions were instituted
	Found	Remedied	Referred To H.M. Inspector	 By H.M. Inspector	
Want of Cleanliness (Sect. 1.)	-	-	-	-	-
Overcrowding (Sect. 2.)	-	-	-	-	-
Unreasonable temperature (Sect. 3.)	-	-	-	-	-
Inadequate ventilation (Sect. 4.)	-	-	-	-	-
Ineffective drainage of floors (Sect. 6.)	-	-	-	-	-
Sanitary Conveniences (Sect. 7.)					
(a) Insufficient	4	4	-	-	-
(b) Unsuitable or defective	-	-	-	-	-
(c) Not separate for sexes	-	-	-	-	-
Other offences against the Act (not including offences relating to outwork).	-	-	-	-	-
Total	4	4	-	-	-

The number of outworkers employed by Messrs. Co-operative Wholesale Society Ltd. included on the August list required by Section 133 (I) (C) was 13.

The Offices, Shops and Railway Premises Act 1963.

On the 31st December the number of registrations had been as follows:-

	Registrations	Number of persons employed
Offices	22	67
Retail Shops	52	188
Catering Establishments	3	12

In addition to the improvements to a Green Grocer's shop mentioned under "Food Hygiene Regulations", work to provide new ladies & gents conveniences at a Solicitors office was in hand at the end of the year.

Inspection of the District.

The following inspections were carried out by the staff of your Surveyor and Public Health Inspector's Department.

Private Housing including Grant Schemes	1086
Council Modernisation Schemes	137
New Council Houses & General Inspections	188
Public Health excluding Food Hygiene Regulations ...	482
Food Hygiene Regulations...	77

Rodent Control.

One of the Council's employees is employed part-time on rodent control.

Set out below is a copy of the report made to the Ministry of Agriculture Fisheries & Food on the performance of the Council's functions under the provisions of the Prevention of Damage by Pests Act, 1949.

Properties Other Than Sewers.	Type of Property Non-Agricultural	Agricultural
1. Number of properties in district	2621	70
2. (a) Total number of properties (including nearby premises) inspected following notification	1451	-
(b) Number infested by (i) Rats	698	-
(ii) Mice	1	-
3. (a) Total number of properties inspected for rats and/or mice for reasons other than notification.	1024	16
(b) Number infested by (i) Rats	27	-
(ii) Mice	-	-

Sewers

4. There were no sewers infested by rats during the year.

Summary of Water Officer's Weekly Reports for the year ended 31st December, 1966.

Total gallons pumped during year	148,627,000
Zero Softened Water	81,008,000
Blended Water	63,470,000
Rinsing Water) Washing Water) ... ... Prolonged Wash)	4,149,000

Salt consumed during the year: 262 tons 12 cwts.

Consumption.

Bulk supply to Forehoe & Henstead R.D.C.	35,946,000
Wymondham, Morley, Spooner Row & Suton	108,532,000
Average daily consumption of Forehoe & Henstead R.D.C.	98,482
Average daily consumption of Wymondham etc. ...	297.348

I have the honour to be
Your obedient Servant

R.F.HUDSON
M.A.P.H.I.

Certificate of Analysis of Water Before Treatment

Sample received from the Wymondham Urban District Council.

Marked: Headworks - High Oak, Wicklewood, Wymondham.

Appearance when received: Slightly opalescent, yellow deposit formed on standing.

Nature of Deposit: Iron compounds.

Colour: Faint yellow. Odour: Nil

Reaction: Neutral. pH: 6.8 Taste: Satisfactory

Results of Chemical Analysis in Parts per Million

Ammoniacal nitrogen	neg. trace.	Hardness as $CaCO_3$:	
Albuminoid nitrogen	neg. trace.	Total	365
Nitrate nitrogen	1.2	Carbonate (temporary)	310
Nitrite nitrogen	0.024	Non-carbonate (permanent)	55
Chloride as Cl	26	Alkalinity as $CaCO_3$	310
Permanganate Value (4 hr.)	0.14	Free carbon dioxide	59
Fluoride as F	0.1	Total solids (at 180°C)	435
		Iron (total)	1.10
		Metals in solution	nil

Opinion

This water is of very good organic quality and there is no chemical evidence of pollution. The total hardness is about 26° Clark, nearly all of which is temporary. The reaction of the water is on the acid side of neutrality, the free carbonic acid content being rather high, and the pH should be raised by appropriate treatment before this water is put into supply, in order to avoid any tendency to corrosion. The iron content of the water gives rise to a rusty deposit on standing and this should be removed. The mineral analysis calls for no special comment; it follows the usual lines for a water derived from the chalk. The fluoride content is low. Given treatment on the lines indicated, this water should then be suitable for drinking and general purposes.

Mineral Analysis

Calcium as Ca	134	parts per million
Magnesium as Mg	6	" " "
Sodium as Na	32	" " "
Carbonate as CO_3	186	" " "
Chloride as Cl	26	" " "
Sulphate as SO_4	55	" " "
Nitrate as NO_3	5	" " "
Iron as Fe	1.1	" " "
Fluorine as F	0.1	" " "
Silica as SiO_2	15	" " "

Certificate of Analysis of Water after Treatment

Distribution System

pH	7.5 (faintly alkaline)
Free CO_2	15 parts per million
Iron	0.51 " " "

The reaction of this water is on the alkaline side of neutrality, as is desirable, and the free carbonic acid content is low. The iron content is rather high for a mains water and may give rise to a rusty deposit on standing. It would of course have no effect on health.